

CLAIMS

1. Diffusing substrate (20) comprising a glass substrate (21) and a diffusing layer (22) deposited on the said glass substrate, characterized in that the glass substrate (21) has a light transmission at least equal to 91% calculated over the 380 to 780 nm wavelength range according to the EN 410 standard.
2. Diffusing substrate according to Claim 1, characterized in that the light transmission is at least equal to 91.5%.
3. Diffusing substrate according to Claim 1, characterized in that the glass substrate (21) has a total iron content such that:
- $$[\text{Fe}_2\text{O}_3]_t \leq \frac{7110}{(1.52 \times e + 0.015) + (17.24 \times e + 0.37) \times \text{redox}}$$
- with $[\text{Fe}_2\text{O}_3]_t$ expressed in ppm and corresponding to the total iron in the composition, e being the thickness of the glass in mm and the redox being defined by $\text{redox} = [\text{FeO}]/[\text{Fe}_2\text{O}_3]_t$, the redox being between 0 and 0.9.
4. Diffusing substrate according to Claim 2, characterized in that the glass substrate (21) has a total iron content such that:
- $$[\text{Fe}_2\text{O}_3]_t \leq \frac{2110}{(1.52 \times e + 0.015) + (17.24 \times e + 0.37) \times \text{redox}}$$
- with $[\text{Fe}_2\text{O}_3]_t$ expressed in ppm and corresponding to the total iron in the composition, e being the thickness of the glass in mm and the redox being defined by $\text{redox} = [\text{FeO}]/[\text{Fe}_2\text{O}_3]_t$, the redox being between 0 and 0.9.
5. Diffusing substrate according to any one of the preceding claims, characterized in that the diffusing layer (22) is composed of agglomerated particles in a binder, the said particles having a

mean diameter of between 0.3 and 2 microns, the said binder being in a proportion of between 10 and 40% by volume and the particles forming aggregates whose size is between 0.5 and 5 microns.

5

6. Diffusing substrate according to Claim 5, characterized in that the particles are semi-transparent particles and preferably mineral particles, such as oxides, nitrides and carbides.

10

7. Diffusing substrate according to any one of the preceding claims, characterized in that the glass substrate (21) has a glass composition based on at least the following constituents:

15

	% by weight
SiO ₂	65-75
Al ₂ O ₃	0-5
CaO	5-15
MgO	0-10
Na ₂ O	5-20
K ₂ O	0-10
BaO	0-5
ZnO	0-5

8. Diffusing substrate according to Claim 1 or 2, characterized in that the glass substrate (21) has a minimum light transmission of 91.50% for a thickness e of at most 4.0 mm, with a total iron content of 200 ppm and a redox of less than 0.05.

20

9. Diffusing substrate according to Claim 1, characterized in that the glass substrate (21) has a minimum light transmission of 91% for a thickness e of at most 4.0 mm, with a total iron content of 160 ppm and a redox of 0.31.

25

10. Diffusing substrate according to Claim 2, characterized in that the glass substrate (21) has a minimum light transmission of 91.50% for a thickness e of at most 1.5 mm, with a total iron content of 160 ppm and a redox of 0.31.
11. Diffusing substrate according to Claim 1, characterized in that the glass substrate (21) has a minimum light transmission of 91% for a thickness e of at most 1.2 mm, with a total iron content of 800 ppm and a redox of 0.33.
12. Diffusing substrate according to Claim 1, characterized in that the glass substrate (21) has a minimum light transmission of 91% for a thickness e of at most 1.2 mm, with a total iron content of 1050 ppm and a redox of 0.23.
13. Use of a diffusing substrate as described in one of Claims 1 to 12 for producing a backlighting system.
14. Use according to Claim 13, for which the backlighting system is provided in an LCD screen.
15. Use according to Claim 13, for which the backlighting system is provided in a flat lamp.